

# ZEITSCHRIFT FÜR PHYSIK B

Condensed  
Matter

Unter Mitwirkung der Deutschen Physikalischen Gesellschaft  
Recognized by the European Physical Society



Editors-in-Chief:

S. Grossmann, Marburg

F. Steglich, Darmstadt

Editor for Rapid Notes:

P. Fulde, Stuttgart

Editorial Board:

E. Courtens, Montpellier

G. Güntherodt, Aachen

F. Haake, Essen

H. Horner, Heidelberg

G. Landwehr, Würzburg

F. Mezei, Berlin

J. Peisl, München

J. Pollmann, Münster

H. Rietschel, Karlsruhe

H. Thomas, Basel

P.R. Wyder, Grenoble

J. Zittartz, Köln

Volume 94 · 1994



Springer International

Founded in 1920. Edited with the collaboration of the Deutsche Physikalische Gesellschaft by K. Scheel and H. Geiger; Vols 124–141 (1947–1955) by M. v. Laue and R.W. Pohl; Vols 142–203 (1955–1967) by O. Haxel and H. Jensen; Vols 204–258 (1967–1973) by E. Fünfer, O. Haxel, H. Jensen, and G. Leibfried, from Vol 259 by E. Fünfer, O. Haxel, G. Leibfried, and H.A. Weidenmüller. Vols 129–175 were produced with the collaboration of the Verband Deutscher Physikalischer Gesellschaften; from Vol 176, the Deutsche Physikalische Gesellschaft. Published: Vols 1–4 (1921) Braunschweig, Fr. Vieweg & Sohn; Vol 5 onwards, Berlin, Springer.

Starting with Vol 272 (1975) *Zeitschrift für Physik* has been divided into two separate journals: *Zeitschrift für Physik A (Atoms and Nuclei)* and *Zeitschrift für Physik B (Condensed Matter and Quanta)*. The title *Zeitschrift für Physik B (Condensed Matter and Quanta)* has been changed to *Zeitschrift für Physik B (Condensed Matter)* from Vol 38 (1980). In 1979 a third section was added: *Zeitschrift für Physik C (Particles and Fields)*. In 1986 *Zeitschrift für Physik D (Atoms, Molecules and Clusters)* was founded and in the same year, from Vol 323 onward, the title of *Zeitschrift für Physik A (Atoms and Nuclei)* was changed to *Zeitschrift für Physik A (Atomic Nuclei)*; this title was retained until 1991, when, with Vol 338, it was changed to *Zeitschrift für Physik A (Hadrons and Nuclei)*.

**Copyright** Submission of a manuscript implies: that the work described has not been published before (except in the form of an abstract or as part of a published lecture, review, or thesis), that it is not under consideration for publication elsewhere; that its publication has been approved by all coauthors, if any, as well as by the responsible authorities at the institute where the work has been carried out; that, if and when the manuscript is accepted for publication, the authors agree to automatic transfer of the copyright to the publisher; and that the manuscript will not be published elsewhere in any language without the consent of the copyright holders.

All articles published in this journal are protected by copyright, which covers the exclusive rights to reproduce and distribute the article (e.g., as offprints), as well as all translation rights. No material published in this journal may be reproduced photographically or stored on microfilm, in electronic data bases, video disks, etc., without first obtaining written permission from the publisher.

The use of general descriptive names, trade names, trademarks, etc., in this publication, even if not specifically identified, does not imply that these names are not protected by the relevant laws and regulations.

*While the advice and information in this journal is believed to be true and accurate at the date of its going to press, neither the authors, the editors, nor the publisher can accept legal responsibility for any errors or omissions that may be made. The publisher makes no warranty, express or implied, with respect to the material contained herein.*

**Special Regulations for Photocopies in the USA** Photocopies may be made for personal or in-house use beyond the limitations stipulated under Section 107 or 108 of U.S. Copyright Law, provided a fee is paid. All fees should be paid to the Copyright Clearance Center, Inc., 21 Congress Street, Salem, MA 01970, USA, stating the ISSN 0722-3277, the volume, and first and last page numbers of each article copied. The copyright owner's consent does not include copying for general distribution, promotion, new works, or resale. In these cases, specific written permission must first be obtained from the publisher.

The Canada Institute for Scientific and Technical Information (CISTI) provides a comprehensive, world-wide document delivery service for all Springer-Verlag journals. For more information, or to place an order for a copyright-cleared Springer-Verlag document, please contact Client Assistant, Document Delivery, Canada Institute for Scientific and Technical Information, Ottawa K1A 0S2, Canada (Tel: 613-993-9251; FAX: 613-952-8243; e-mail: cisti.docdel@nrc.ca).

Springer-Verlag Berlin, Heidelberg, New York, Tokyo – Printers: Universitätsdruckerei H. Stürtz AG, Würzburg – Printed in Germany  
© Springer-Verlag Berlin, Heidelberg 1994 – Springer-Verlag GmbH & Co. KG, Berlin

# Contents Volume 94 (1994)

- Afanas'ev AM → Tsymbal EYu 217  
 Alsing PM, Kovanis V, Gavrielides A: Dynamics of optical switching phenomena in dense media 123  
 Anzin VB → Pechen EV 13  
 Asen-Palmer M, Keck K: Measurements of the dynamic conductance on SS- and NS-point contacts 21  
 Ausloos M → Durczewski K 57  
 Bakker K → Kikoin KA 79  
 Barbiellini B → Weger M 387  
 Barentzen H: Unitary transformation treatment of a single hole in an Ising antiferromagnet 161  
 Bauer E, Schaudy G, Hilscher G, Keller L, Fischer P, Dönni A: Magnetic properties of  $\text{CePd}_2\text{Ga}_3$  359  
 Behler S, Bernasconi M, Jess P, Hofer R, Güntherodt H-J, Wirth G, Wiesner J: Scanning tunneling microscopy study of pinning-induced vortex lattice distortion in ion-irradiated  $\text{NbSe}_2$  (*Rapid note*) 213  
 Bele P → Kahlich S 39  
 Benvenuto F, Casati G, Shepelyansky DL: Rydberg stabilization of atoms in strong fields: the "magic mountain" in the chaotic sea 481  
 Bernasconi A, Mombelli M, Fisk Z, Ott HR: Low-temperature transport properties of  $\text{UCu}_5$  423  
 Bernasconi M → Behler S 213  
 Borstel G → Nolting W 409  
 Braden M, Schnelle W, Schwarz W, Pyka N, Heger G, Fisk Z, Gamayunov K, Tanaka I, Kojima H: Elastic and inelastic neutron scattering studies on the tetragonal to orthorhombic phase transition of  $\text{La}_{2-x}\text{Sr}_x\text{CuO}_{4\pm\delta}$  29  
 Brenig W → Evers F 155  
 Brenig W → Kratzer P 147  
 Brunner B → Pechen EV 13  
 Brunner H → Kahlich S 39  
 Bulla R, Keller J, Pruschke T: Functional integral approach to the single impurity Anderson model 195  
 Büttiker M, Thomas H, Prêtre A: Current partition in multiprobe conductors in the presence of slowly oscillating external potentials 133  
 Büttner H → Fehske H 91  
 Casati G → Benvenuto F 481  
 Chen J → Yin D 249  
 Claessen R → Reinert F 431  
 Clements BE, Krotschek E, Saarela M: Analytic structure of long-wavelength excitations in  $^4\text{He}$  surfaces 115  
 Czucholl G → Halvorsen E 291  
 Dambeck T → Nolting W 409  
 Dević SD → Gajić R 261  
 deVisser A → Kikoin KA 79  
 Dimov TN → Ribarov DM 65  
 Dombrowski R → Kötztler J 9  
 Dönni A → Bauer E 359  
 Dumpich G, Friedrichowski St: Anisotropic magnetoresistance in thin inhomogeneous gold films 3  
 Durczewski K, Ausloos M: Systems of reduced electron concentration and dimensionality. I. Temperature dependence of the chemical potential and the electrical resistivity 57  
 Duxbury PM → Selke W 311  
 Esquinazi P → Ziese M 265  
 Evers F, Brenig W: Long time tails in the quantum Hall effect. A classical trajectory study 155  
 Farid ZM → Refaat Ali A 227  
 Fehske H, Ihle D, Loos J, Trapper U, Büttner H: Polaron formation and hopping conductivity in the Holstein-Hubbard model 91  
 Ferrater C → Tejada J 245  
 Fischer P → Bauer E 359  
 Fisk Z → Bernasconi A 423  
 Fisk Z → Braden M 29  
 Frahm K, Mühlischlegel B: Supersymmetric path integrals applied to the transmission of a mesoscopic ring 201  
 Fricke M → Tsymbal EYu 217  
 Friedrichowski St → Dumpich G 3  
 Fulde P → Mehlig B 335  
 Gajić R, Dević SD, Konstantinović MJ, Popović ZV: Superconductivity induced phonon anomalies in the Raman spectra of Zn and Ni doped  $\text{YBa}_2\text{Cu}_3\text{O}_7$  261  
 Gamayunov K → Braden M 29  
 Gavrielides A → Alsing PM 123  
 Geppert U, Schreckenberger M, Zittartz J: Metastable states of an asymmetric spin-glass with one stored pattern 187  
 Gerroff I → Milchev A 101  
 Ghobrial FZ → Refaat Ali A 227  
 Gold A: Elementary excitations in nanochannel arrays of quantum wires 395  
 Gold A: Instability of layered quantum liquids: 3. New phase in fermion superlattices 373  
 Gorges E, Grosse P, Sturm J, Theiß W: A parameterization of the effective dielectric function of a two-phase composite medium 223  
 Görlitz D → Kötztler J 9  
 Grifoni M → Stockburger J 447  
 Grosse P → Gorges E 223  
 Gu BX, Zhang HY, Zhai HR, Lu M, Maio YZ, Shen BG: Magnetic properties of amorphous  $\text{Bi}_2\text{DyFe}_5\text{O}_{12}$  369  
 Güntherodt H-J → Behler S 213  
 Gutiérrez A → López MF 1  
 Hajdu J, Lesovik GB: On the additivity of Flicker contributions to the excess noise in quantum conductors 487  
 Halvorsen E, Uhrig GS, Czucholl G:  $1/d$  corrections for interacting spinless fermions: one-particle properties 291  
 Haug C: Generalized kinetic theory of sticking and desorption 319  
 Haupt R, Wendler L: Resonant magnetopolaron effects in parabolic quantum wells in a tilted magnetic field 49  
 Heermann DW → Wilding NB 301  
 Heger G → Braden M 29  
 Heinen I → Kahlich S 39  
 Hesse J → Tsymbal EYu 217  
 Hilscher G → Bauer E 359  
 Hizhnyakov V → Sigmund E 17  
 Hofer R → Behler S 213  
 Hüfner S → Reinert F 431  
 Hülsenbeck G, Stephan F: Hubbard-like models in high spatial dimensions 281  
 Ihle D → Fehske H 91  
 Iliev IA → Ribarov DM 65  
 Jess P → Behler S 213  
 Kahlich S, Schweitzer D, Rovira C, Paradis JA, Whangbo M-H, Heinen I, Keller HJ, Nuber B, Bele P, Brunner H, Shibaeva RP: Characterisation of the Fermi surface and phase transitions of  $(\text{BEDO-TTF})_2\text{ReO}_4 \cdot (\text{H}_2\text{O})$  by physical property measurements and electronic band structure calculations 39  
 Kaindl G → López MF 1  
 Kažukauskas V, Vaitkus J: Investigation of transient transport and recombination phenomena in semiinsulating GaAs 401  
 Keck K → Asen-Palmer M 21  
 Keller HJ → Kahlich S 39  
 Keller J → Bulla R 195  
 Keller J → Bauer E 359  
 Kelley RJ → Quijada MA 255  
 Kikoin KA, deVisser A, Bakker K, Takabatake T: On the low-temperature thermal properties and low-energy Fermi excitations in  $\text{CeNiSn}$  79  
 Kirov M → Mrachkov J 365  
 Ko T → Wang KG 353  
 Kojima H → Braden M 29  
 Konstantinović MJ → Gajić R 261  
 Kötztler J, Görlitz D, Dombrowski R, Pieper M: Goldstone-mode induced susceptibility-singularity extending to  $T_C$  of the Heisenberg ferromagnet  $\text{EuS}$  9  
 Kovanis V → Alsing PM 123  
 Kratzer P, Brenig W: Long time tails in the quantum Hall effect. A numerical wave packet study 147  
 Kremer RK → Sigmund E 17  
 Krotschek E → Clements BE 115  
 Kumar S → Reinert F 431  
 Küpfer H → Yin D 249  
 Laanaït L, Loulidi M, Masaif N: Absence of the partially ordered phase in the  $q$ -state models. I. Renormalization group approach 109  
 Lalov IJ → Ribarov DM 65  
 Laubschat C → López MF 1  
 Lesovik GB → Hajdu J 487  
 Leyarovsky E → Mrachkov J 365  
 Loos J → Fehske H 91  
 López MF, Laubschat C, Gutiérrez A, Kaindl G: Resonant photoemission in highly localized versus weakly localized solids 1  
 Loulidi M → Laanaït L 109  
 Lu M → Gu BX 369  
 Maio YZ → Gu BX 369  
 Manolescu A, Stănescu T: Homogeneous – inhomogeneous transitions in a Landau level with spin splitting 87  
 Masaif N → Laanaït L 109  
 Mehlig B, Fulde P: On the ground state of the half-filled Hubbard model 335  
 Mei YP → Yan XH 439

- Mergenthaler DB, Pietralla M: Heat conduction in highly oriented polyethylene 461
- Milchev A, Gerroff I, Schmelzer J: Monte Carlo study of spinodal decomposition in adiabatically closed systems 101
- Mombelli M → Bernasconi A 423
- Monkenbusch M → Prager M 69
- Mrachkov J, Kirov M, Leyarovsky E: Zeeman effect on magnetic susceptibility in singlet ground state  $\text{PrNi}_2$  365
- Mühschlegel B → Frahm K 201
- Münkel C → Wilding NB 301
- Nolting W, Dambeck T, Borstel G: Temperature-dependent electronic structure of Gadolinium 409
- Nuber B → Kahlich S 39
- Odenbach S: Forced diffusion in magnetic fluids under the influence of a strong magnetic field gradient 331
- Onellion M → Quijada MA 255
- Ott HR → Bernasconi A 423
- Paradis JA → Kahlich S 39
- Parak F → Tsymbal EYu 217
- Pechen EV, Anzin VB, Prückl A, Schönberger R, Brunner B, Renk KF: Single-plate far-infrared Fabry-Perot étalons with high- $T_c$  superconducting coatings 13
- Peter M → Weger M 387
- Pieper M → Kötzler J 9
- Pietralla M → Mergenthaler DB 461
- Pleshanov NK: Neutrons at the boundary of magnetic media 233
- Popović ZV → Gajić R 261
- Prager M, Wakabayashi N, Monkenbusch M: Coupling the methyl group in acetamide to phonons: a consistent view of tunnelling and lattice dynamics 69
- Prêtre A → Büttiker M 133
- Prückl A → Pechen EV 13
- Pruschke T → Bulla R 195
- Pyka N → Braden M 29
- Quijada MA, Tanner DB, Kelley RJ, Onellion M:  $a$ - $b$  plane anisotropy of single-domain crystals of  $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_8$  255
- Rastelli E, Tassi A: Quantum anisotropic Heisenberg triangular antiferromagnet: application to  $\text{CsCuCl}_3$  139
- Refaat Ali A, Farid ZM, Ghobrial FZ: Investigation of the recovery and annealing kinetics of deformed  $\alpha$ -iron by magnetic measurements 227
- Reinert F, Kumar S, Steiner P, Claessen R, Hübner S: The electronic structure of  $\text{KMnO}_4$  investigated by photoemission and electron-energy-loss spectroscopy 431
- Renk KF → Pechen EV 13
- Ribarov DM, Iliev IA, Dimov TN, Lalov IJ: Magnetogyrotropy in twisted CdS crystals 65
- Rovira C → Kahlich S 39
- Saarela M → Clements BE 115
- Sachdev S: Quantum phase transitions and conserved charges 469
- Sacramento PD: Thermodynamics of the spin- $S$  antiferromagnetic Heisenberg chain 347
- Sasseti M → Stockburger J 447
- Schaudy G → Bauer E 359
- Schauer W → Yin D 249
- Schmelzer J → Milchev A 101
- Schnelle W → Braden M 29
- Schönberger R → Pechen EV 13
- Schreckenberger M → Geppert U 187
- Schwarz W → Braden M 29
- Schweitzer D → Kahlich S 39
- Shen BG → Gu BX 369
- Shepelyansky DL → Benvenuto F 481
- Shibaeva RP → Kahlich S 39
- Sigmund E, Hizhnyakov V, Kremer RK, Simon A: On the existence of percolative phase separation in high- $T_c$  cuprates 17
- Simon A → Sigmund E 17
- Stănescu T → Manolescu A 87
- Steiner P → Reinert F 431
- Stephan F → Hülsenbeck G 281
- Stockburger J, Grifoni M, Sasseti M, Weiss U: Nonlinear acoustic response of amorphous metals in the tunneling model 447
- Sturm J → Gorges E 223
- Takabatake T → Kikoin KA 79
- Tanaka I → Braden M 29
- Tanner DB → Quijada MA 255
- Tassi A → Rastelli E 139
- Tejada J, Zhang XX, Ferrater C: Magnetic relaxation in very thin films of Dy deposited onto crystalline Cu (111) 245
- Terzidis O, Würger A: Dynamics of a coupled pair of two-level tunnelling systems 341
- Theiß W → Gorges E 223
- Thomas H → Büttiker M 133
- Trapper U → Fehske H 91
- Tsymbal EYu, Afanas'ev AM, Fricke M, Hesse J, Parak F: An unambiguous procedure for discovering relaxation influence on Mössbauer spectra 217
- Uhrig GS → Halvorsen E 291
- Vaitkus J → Kažukauskas V 401
- Velický B → Kalvová A 273
- Wakabayashi N → Prager M 69
- Wang KG, Xing XS, Wu XF, Zhu FW, Ko T: Kinetics of particle coarsening processes. I. Nonequilibrium statistical mechanical formulation 353
- Weger M, Barbiellini B, Peter M: Solutions of Eliashberg equations for an electron-phonon coupling with a cutoff 387
- Weiss U → Stockburger J 447
- Wendler L → Haupt R 49
- Whangbo M-H → Kahlich S 39
- Wiesner J → Behler S 213
- Wilding NB, Münkel C, Heermann DW: Domain growth and finite-size-scaling in the kinetic Ising model 301
- Windte V → Yin D 249
- Wirth G → Behler S 213
- Wu XF → Wang KG 353
- Würger A → Terzidis O 341
- Würger A: Mode-coupling theory for relaxation of coupled two-level systems 173
- Xing XS → Wang KG 353
- Yan JR → Yan XH 439
- Yan XH, Yan JR, You JQ, Mei YP: Global energy spectra of bands and density of states in a class of two-tile systems 439
- Yin D, Schauer W, Windte V, Küpfer H, Zhang S, Chen J: A new understanding of the resistive state and the V-I characteristics of high- $T_c$  superconductors 249
- You JQ → Yan XH 439
- Zhai HR → Gu BX 369
- Zhang HY → Gu BX 369
- Zhang S → Yin D 249
- Zhang XX → Tejada J 245
- Zhu FW → Wang KG 353
- Ziese M, Esquinazi P: Critical current density of a  $\text{YBa}_2\text{Cu}_3\text{O}_7$  film: comparison between experiment and collective pinning theory 265
- Zittartz J → Geppert U 187

Indexed in *Current Contents*

Evaluated and abstracted for PHYS on STM